



Committing Our Lives To Saving Yours



CITY OF DURHAM
FIRE DEPARTMENT
2014—2015
Fiscal Year Report

The DFD Year at a Glance

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LETTER FROM THE FIRE CHIEF

Did we use your tax dollars wisely this year?

The Durham Fire Department (DFD), an all-hazard department of 316 personnel, utilizes your tax dollars to prepare for and mitigate over 21,000 emergencies in our community per year such as:

- structure and car fires
- emergency medical service (EMS) calls
- Technical rescue, water rescue and hazardous materials spill calls
- assisting the Durham Police Department

Your tax dollars enable us to keep firefighters assigned at 16 City fire stations, 24 hours a day. As a result, the City **had no fire deaths** in the 2014 – 2015 Fiscal Year.

It was a busy year once again. We completed a change in the self-contained breathing apparatus, or (SCBA), which provides a reliable, clean source of air that allows firefighters to work inside buildings filled with smoke, to search for trapped residents, and effectively extinguish fires. Our existing inventory was nearing the end of its lifespan and its replacement was vital to keeping you safe. We purchased cutting edge thermal imaging cameras for all fire apparatus. These cameras allow firefighters to “see” through smoke to quickly locate

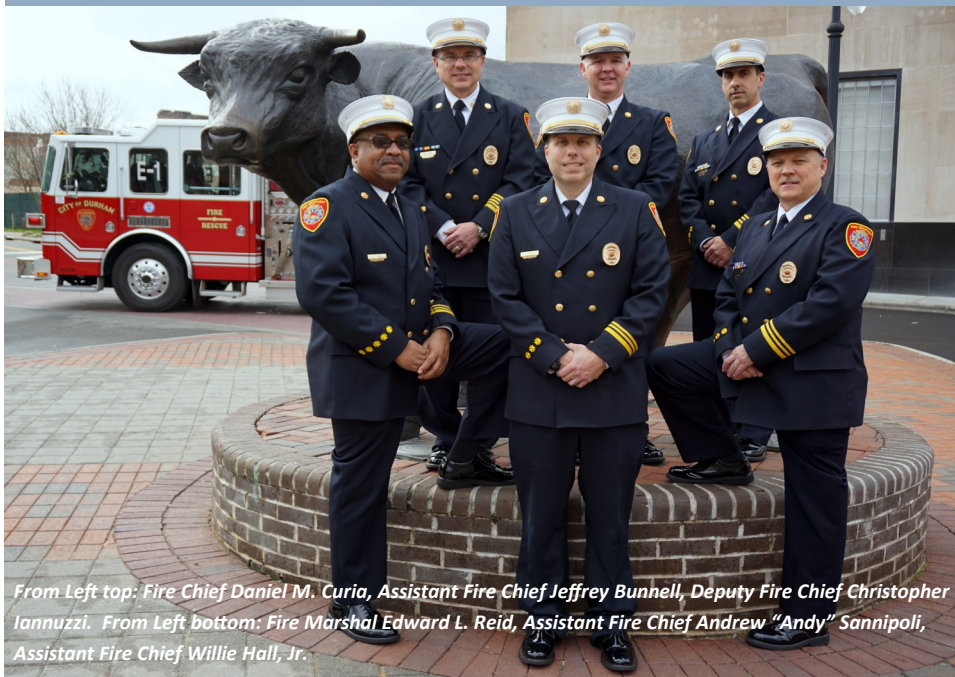


victims and fire. We replaced extrication equipment, enabling firefighters to quickly remove people from trapped vehicles. All these acquisitions improve the chances of survivability and reduce property damage.

Administratively, we re-configured our Training Division to provide more hands-on training to your city's firefighters. These assignments also allow training staff to respond to emergency calls to understand the training needs facing firefighters. We also enhanced our ability to keep you safe through new software for analyzing our performance, enhancing our time keeping and tracking our maintenance and inventory costs.

Our eight Assistant Fire Marshals increased their inspections this year keeping businesses and public places safe for you. Your tax dollars also provided for community education on fire safety and prevention, which enables you to help us keep Durham safe.

A City of Durham resident or visitor's safety is our principle concern and the department's activities, directly or indirectly, support that focus. This report highlights how we work to utilize your tax dollars efficiently and how those funds provide you with skilled, well trained and dedicated professionals who are committed to your safety.



From Left top: Fire Chief Daniel M. Curia, Assistant Fire Chief Jeffrey Bunnell, Deputy Fire Chief Christopher Iannuzzi. From Left bottom: Fire Marshal Edward L. Reid, Assistant Fire Chief Andrew "Andy" Sannipoli, Assistant Fire Chief Willie Hall, Jr.

The Durham Fire Department Strategic Plan provides a road map for the department's direction over the next several years. The following are the "big picture" issues that we face and the majority of our efforts over the next several years will be directed at addressing these issues.

✱ **Reduce Response Times to Fire and Medical Emergencies**

Meeting or exceeding response standards ensures that emergency incidents are resolved quickly and efficiently. This is key to preventing fatalities and reducing property loss.

✱ **Ensure businesses are compliant with the fire code**

Businesses in compliance with fire code enjoy a significantly reduced probability for fire/property damage and staff/customer injury. To ensure compliance, Durham businesses are subject to regular fire inspections.

✱ **Increase operational efficiencies with technology**

Allows for the latest fire and operations technology, to enhance prevention and fire suppression efforts and provide training without additional costs.

✱ **Plan for long term growth**

The growth of the city in the past five years (population 229,183 in 2010 to 247,536 in 2015) and its expected continued growth indicates the need for more fire stations and personnel to meet the city's safety needs.

DFD Strategic Plan

Purpose Statement:

Provide community protection through emergency response and fire prevention efforts.

CORE PRODUCTS AND SERVICES

■ EMERGENCY RESPONSE

Fire, Rescue, EMS, HazMat, Technical Rescue, USAR and Swiftwater incident mitigation

■ FIRE PREVENTION

- Inspections/Fire Code Enforcement
- Fire/Arson Investigation
- Public Education/Information

MEASURES

- Average response times
- Percent of responses within stated targets
- Percent of businesses inspected
- Percent of fire inspectors meeting inspection goals
- Ratio of dollars spent for preventive maintenance compared to repair costs.
- Ratio of program funding tied to high perform measures or measures trending positively

Completed DFD Strategic Plan Initiatives



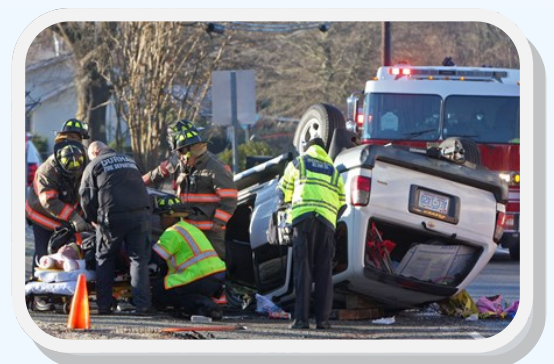
- ♦ Evaluated the location/district boundaries for existing apparatus and made adjustments to improve response times
- ♦ Maximized efficiency and accountability through the use of workflow technology
- ♦ Streamlined the hiring process
- ♦ Developed a standardized continuing education training program



Firefighter Emily Hannigan re-loading hose on a fire truck .

New Initiatives in the Strategic Plan

- ♦ Add or redistribute existing resources to reduce response times
- ♦ Establish a reliable database of businesses subject to an inspection per NC Fire Code
- ♦ Implement distance learning solutions for the training division
- ♦ Transition to priority based budgeting through the development of a financial strategic plan inclusive of projected future service expansion.



Fire Operations



Your DFD Fire Operations Division is divided into three battalions with 16 fire stations covering City districts organized to facilitate effective responses to calls for service.

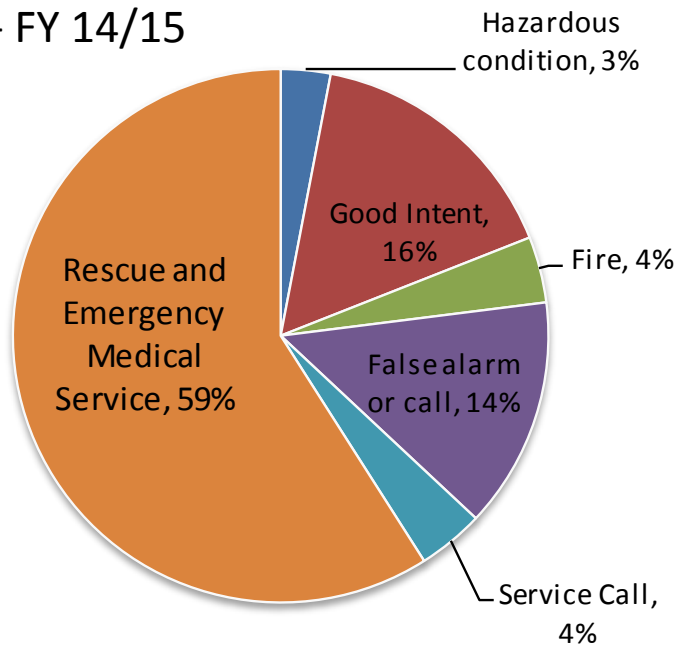
Types of Calls received by the DFD

“When you call the DFD, the calls are either dispatched as Emergency (Code 3) or Non-Emergency (Code 1).

Emergency calls include most fire and EMS calls and some for technical rescue , hazardous materials (Hazmat) and

Swiftwater. “For these calls,” says Assistant Chief of Operations, Willie Hall, “one or more units are dispatched.” Non-Emergency calls (Code 1) include good intent calls, service calls, special weather calls and some alarms. You may see smoke in the area (good intent) or you call for a gas smell (service call). We dispatch a single engine for these and other non-emergency calls.

Fire Calls - FY 14/15



CALL STATS

- RESCUE AND EMERGENCY MEDICAL SERVICES — 12,708
- GOOD INTENT— 3,441
- FALSE ALARM—2,863
- FIRE INCIDENTS—850
- SERVICE CALL—776
- HAZARDOUS CONDITION—614

Hazardous Materials (HAZMAT)



There are 24 members that make up your Hazardous Materials Response Team (HMRT). Most HMRT members are assigned to either Station 13 or Station 3, where they staff the Hazmat response vehicle (HM13). The response level for hazardous

materials (Hazmat), may vary depending on the circumstances of the reported incident. For hazmat incidents, the initial dispatch will include the HMRT only if you indicate that there may be hazardous materials involved; such as a gas spill, natural gas leak or chemical spill. If hazardous materials are not indicated, the first engine will assess the need for the HMRT upon arrival.

All 287 of your DFD firefighters have the minimum standards of Hazmat Training.

Technical Rescue

Your DFD technical rescue team consists of field personnel assigned to Ladder Companies, Squad Companies, and Engine 16. These individuals have additional specialized training in the areas of high angle, low angle, trench, and confined space rescue. Another technical rescue team, Swiftwater rescue services, are also specially trained and assigned to Station 15. Fire personnel assigned to Engine 16 and Ladder 2, as well as

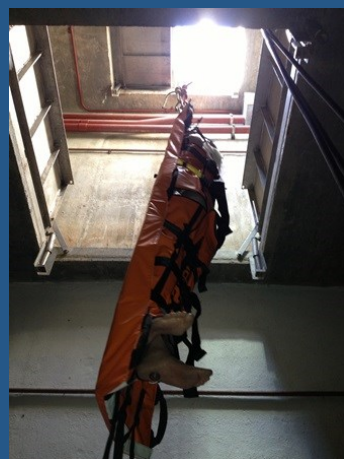
other personnel, participate in the region's Urban Search and Rescue team (USAR), Task Force 8. The multi-disciplinary team includes members from the neighboring fire departments of Raleigh and Chapel Hill.



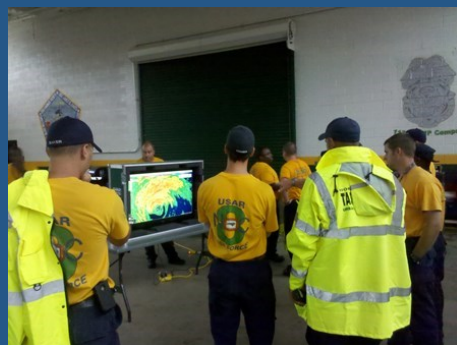
Justice Center Rescue

DFD Fire Vehicle Inventory

- 21 Engines (5 in reserve)
- 7 Ladders (3 in reserve)
- 4 Battalion Chief Vehicles (1 in reserve)
- 2 Mobile Support vehicles (1 in reserve)
- 1 Technical Rescue Truck
- 1 Swiftwater Rescue Truck
- 3 Squads
- 1 Chief Vehicle
- 1 Deputy Chief Vehicle
- 4 Assistant Chief Vehicles
- 1 Station Truck



Confined space training



USAR Team during hurricane Irene

The Fire Prevention and Education Division wears many hats. Our first hat is fire safety education through the Fire and Life Safety program. The following seven safety topics make up this program:

Remembering When

Designed to prevent and/or reduce falls often experienced by seniors. The program also addresses fire safety concerns specific to seniors.



Junior Fire Marshal

A four day course where youth ages 11-15 learn about fire safety and various career options in the fire service.



Start Safe

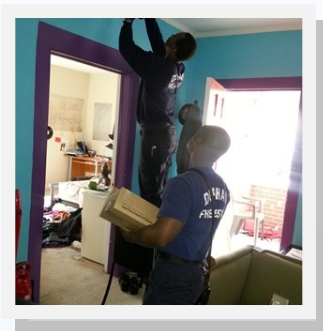
This program teaches children in preschool through 5th grade fire safety topics such as smoke alarms and home escape plans.

Alarm for Life

Provides smoke and/or carbon monoxide alarms and installation when you are unable to obtain or install them.

Complimentary Home Evaluations

We will visit your residence or business and discuss fire safety, recommend safety improvements based on the visit and assist with planning an evacuation route.



Fire Extinguisher Training

Hands-on fire extinguisher training for businesses, homeowners and organizations.

Fire Station Tours

Through these tours you may have a look at fire equipment, apparatus, and community areas of the fire station.



Fire Prevention and Education Stats

- 275 Safety topics delivered (1,717 hours)
- 255 Alarms requested
- 302 Alarms installed
- 14 Fire extinguisher trainings given
- 12 Station tours given
- 20 Junior Fire Marshal graduates
- 104 Investigations conducted

Fire Inspections

To keep our community safe and reduce fire hazards, we wear the inspection hat. This fiscal year, 7,286 public businesses and buildings were inspected. Without inspections, your family could be susceptible to great danger while dining in your favorite restaurants, enjoying a movie at the theaters, enjoying a get-away at a Durham hotel or even in your place of worship. Fire Inspections in the City of Durham help ensure that buildings are up to the NC Fire Code and identify possible fire hazards and other dangers that risk putting the public in harm's way.

In addition, to make sure that any new buildings in your community are safe, this division is involved in the review of building plans to assure that they are in compliance with the NC Fire Code and equipped with the necessities to protect your safety in the event of a fire. Assistant Chief and Fire Marshal Edward L. Reid said that, "Before the first brick is ever laid, we make sure that these buildings include necessities such as: sprinklers; smoke and fire alarms; fire extinguishers and the required ways out of the building."

The result of the early review of plans helps to avoid fire related delays in the construction process and in the opening of the business, as well as allowing us to provide you peace of mind that we've done all possible to provide for your safety once the building is complete.

The final hat we wear is the most personal: community outreach. You invite us to hundreds of educational events annually to learn the role that firefighters and fire inspectors play in your level of safety at home and at play. In working with you at these events, we are able to develop relationships with you and your neighborhood. These relationships are very important to us. Through them, you trust us to help keep you safe and learn how you play an integral role in your family's safety.



Assistant Fire Marshal Seaman during an on scene investigation



Captain McAlexander explains the tools on a fire engine to potential future fire fighters.

In nearly every fire, medical emergency, and natural or man-made disaster in your community, we are the first responders. When a crisis arises, you depend on us to fulfill the requirements of our duties for each fire and EMS incident in the community. It is essential that the fire department is equipped with vehicles that can respond quickly. A failure of a vehicle or equipment in any of these emergencies can significantly impact your safety and health. To keep your firefighters prepared and focused on your safety, the budget provides support personnel who handle all administrative tasks to efficiently operate the department including: the purchase of firefighting gear, fuel and maintenance for the fire apparatus, and services that you probably pay yourself, such as electric and water bills.

We review three main factors to help us determine how and when to replace vehicles and equipment—protecting you to the best of our ability. We analyze our mission and the changes in your community. For example, our analysis may necessitate using a fire engine, originally purchased to meet basic fire suppression needs, in an EMS capacity. We also compare the performance of an apparatus against its annual maintenance cost. If the maintenance cost increases while its value decreases, this is not a good use of your tax dollars. Finally, we review firefighter safety and any technology advancements to improve on that safety. These main factors help us to make informed and fiscally responsible decisions regarding equipment purchases, which enable us to provide you with the best fire rescue and EMS service possible and to ensure the safety and health of your community.

This fiscal year, your tax dollars enabled these purchases and upgrades:

- Self-contained Breathing Apparatus
 - ◆ Thermal Imaging Cameras (TICs)
 - ◆ Upgrades to air system
- High Pressure Air bags (for lifting heavy objects)
- Communications System
- Extrication equipment
- Fire engine

Planning and Administration

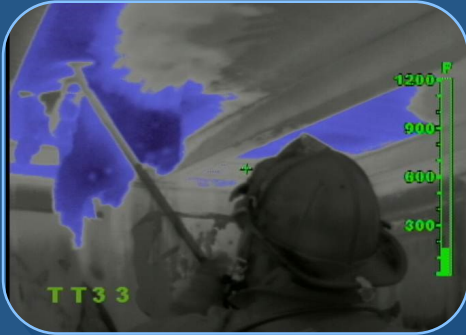


Equipment

Upgrade and Replacement Costs

- SCBA (total \$1,800,000)
 - ◆ SCBA—\$1,550,000
 - ◆ TICs—\$244,405
 - ◆ Upgrade to air system—\$116,000
- High-pressure air bags—\$45,000
- Communication System—\$9,000
- Extrication Equipment—\$71,940





Thermal Imaging cameras enable firefighters to see through smoke and locate people quickly in fires.



State of the art SCBA

Thermal Imaging Cameras

Helping firefighters to see through smoke and rescue victims in a fire, Thermal Imaging Cameras (TICs) are critical to saving lives. This year, the department replaced six TICs, most of which were over 10 years old, with 40 state-of-the-art cameras, enabling all emergency fire vehicles in Durham to be equipped and ready to save lives. The new cameras give a clearer picture of the room and are more reliable, but the most important aspect of this purchase is that it provides at least one imager for every truck. In addition, Assistant Chief Sannipoli states that the cameras enable firefighters to “see the heat from wiring and electrical conduits in the wall.” This minimizes property damage as firefighters “don’t have to tear out as much of a wall to expose and extinguish hidden fire” said Sannipoli. Now all crews can begin searching with the aid of a camera that will improve the speed of the search and improve the chances that a fire victim will be found in time to save his or her life.

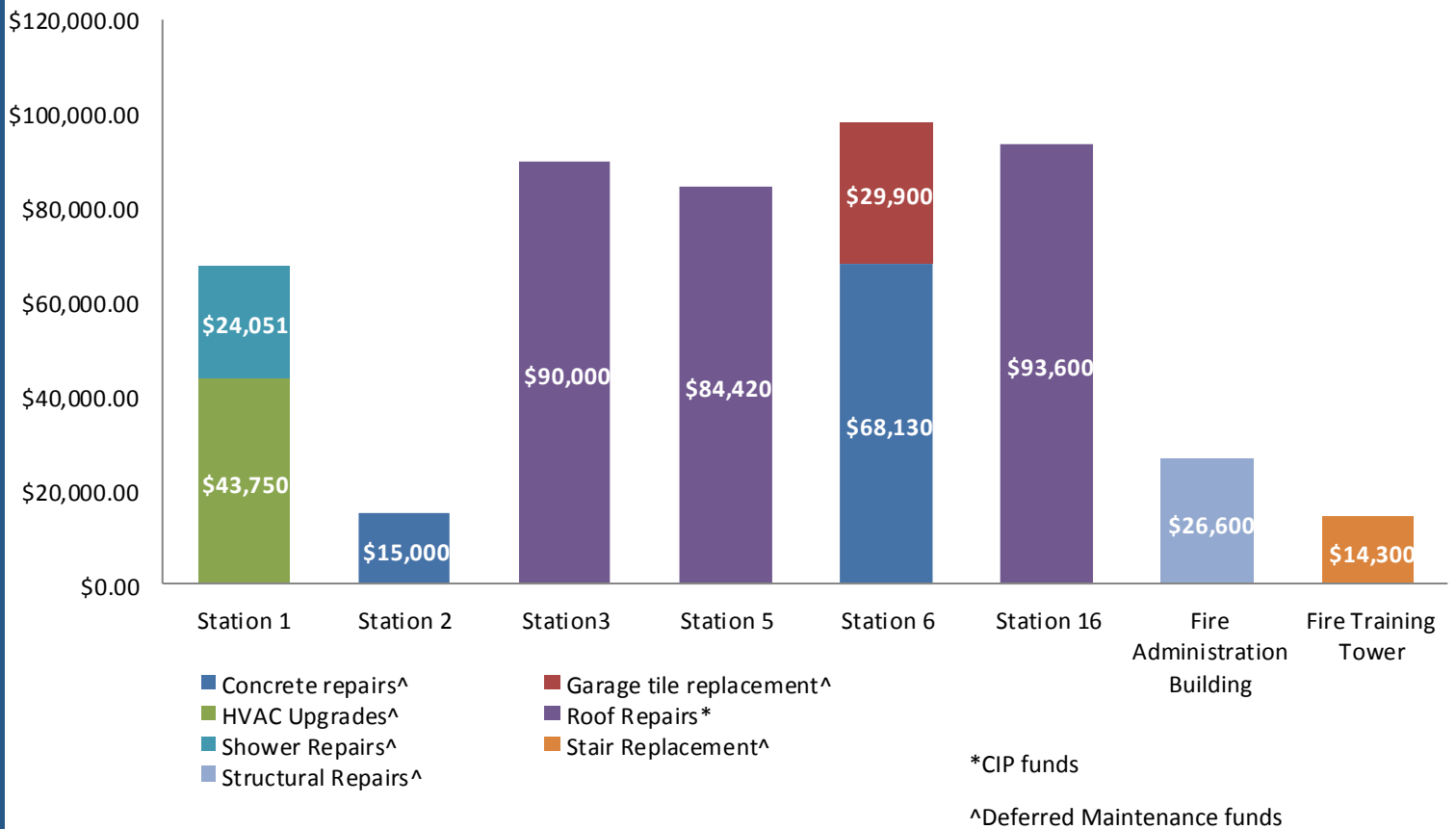
Self-contained breathing apparatus (SCBA)

To search for victims and aggressively attack building fires, firefighters must be able to work inside the smoke-filled building for prolonged periods of time. Self Contained Breathing Apparatus (SCBA) is the equipment that allows firefighters to breathe fresh air inside burning buildings. The SCBAs the department replaced were at the end of their useful life and required increasing maintenance. Replacement parts were also becoming increasingly difficult to obtain. The new SCBAs also enhance firefighter safety through two-way communication that allows the fire chief to monitor each firefighter’s air supply and send emergency evacuation orders. Rescue teams can also more quickly find trapped or lost firefighters with the use of a new tracking unit thanks to a built in beacon on each SCBA.

DFD Accreditation

DFD proudly maintains accreditation from the Center for Public Safety Excellence. Accreditation provides standards that we strive to follow, such as reaching emergencies within City limits in 5 min. 30 sec. from time of dispatch, inspecting and assessing all occupancies by the State fire code, and designing operational plans, protocols and objectives to address expected hazards and risks in your community.

Repair and Upgrade Costs



The chart above indicates what and where projects were completed and with either Capital Improvement Program (CIP) or deferred maintenance funding. The CIP is a statement of the City's policy regarding long-range physical development. This plan is developed for a six year period and is updated and revised annually. To be classified as a CIP project, the entire price of the project must exceed \$100,000. Funding for the CIP comes from impact fees, enterprise funds, grants, the capital project fund, pay-go funding, and debt financings. The recommendations of the CIP Advisory Committee, the Scoring Team, and the Citizens CIP Committee were submitted to the City Manager for review and were presented to the City Council. The Plan was adopted by the City Council on June 16, 2014.

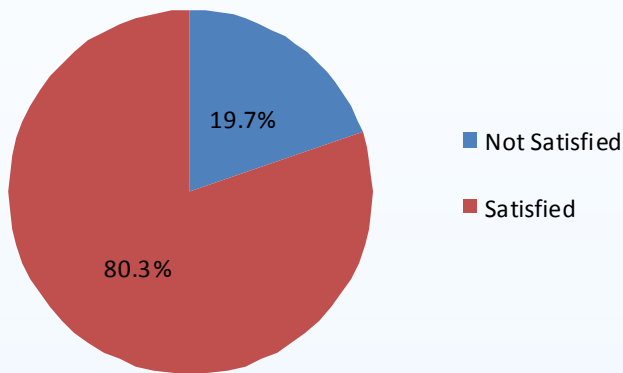
Deferred Maintenance funds come from the City's General Fund. These funds are distributed on a priority basis, with safety taking precedence.

Employee Satisfaction Survey (ESS)

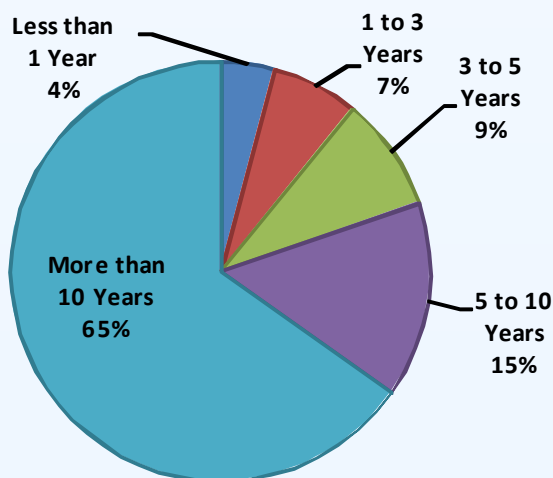
In March, 75% of DFD employees participated in the Employee Satisfaction Survey (ESS). The survey identified successes and issues needing improvement. Research shows that higher levels of employee engagement* lead to increased organizational success. Employees were provided with the results and encouraged to provide comments and questions to management.

A very specific City-wide engagement plan will solicit input from all city departments. The input from members of the DFD will then be implemented in an effort to build an even better Durham Fire Department. In the coming year, the DFD will capitalize on successes, evaluate areas for improvement, and work collaboratively to move forward.

Employees satisfied at work



Intended Length of Stay



ESS Stats

- **SUCCESSES**
 - 25.1% increase in satisfaction
 - 75.1% engaged employees
 - 77.4% feel like a team member
 - 79% supervisor engagement
- **IMPROVEMENT NEEDS**
 - 60.3% not engaged with City Management
 - 51% not engaged with Department Management

**An engaged employee is one that brings added discretionary effort to their job and is motivated by the elements of an “engagement driver,” such as the nature of their work, their team members or their direct supervisor.*



Your DFD firefighters must complete six months of basic fire and EMS training before they can serve in the operations division and in your community. But your firefighters have more than just these six months of training ; in fact, fire training is a continuous process. Every year, firefighters have to complete 200 hours in continuing education in fire and rescue and Officers and Drivers have to complete 212 hours. In addition, all fire personnel have to complete 96 hours every 5 years in EMS training. Rest assured that your firefighters are well trained and capable of handling any emergency related to our core mission.

Training Stats

- 109 training classes held by the DFD Training Division
- 3,000 training classes held at stations
- 111 certifications achieved
- 146 employees received outside training

The majority of the 200-212 hours of training taken by DFD firefighters is con-ed (continuing education) and certification classes. These classes allow the DFD to increase the knowledge base of our personnel who will be responding to emergencies.

In addition, the training division has the capacity to complete 85% of this required and/or needed training in-house, furthering your tax dollars. While not only saving you money, completing required training ourselves also allows us to conduct more training, because we do not have to access or pay other entities to provide the training for us.

New Burn Building

Installed in July, 2014, the new burn building provides a controlled environment for firefighters to observe fire behavior, feel the heat of true fire conditions and practice all types of operations in a low visibility setting. Built in 1975, the old burn building was no longer useful in training.

In 2000, the model residential side was condemned and live fire behavior classes had to be conducted offsite, increasing training costs. Through Capital Improvement Project funds of \$482,000 the old building was demolished and the new one purchased; enabling onsite training for recruits and continuing education.



Demolition of the old burn building.



The new burn building.

Performance Ability Test (PAT)



In 2015, the DFD changed its annual fitness testing program to the performance ability test (PAT). This assessment allows the department to gauge the physical readiness of its employees and enables the employee to recognize their personal fitness as it relates to their duties.

Testing done for over 20 years, including crunches, bench presses, and flexibility, was replaced by job specific tasks such as rescue drags, hose deployment, stair climbs, and crawling searches. Performed in full turn-out gear, PAT testing requires an even higher level of fitness than in the past. Further, the PAT testing that we use has been modified based on a validated test used by many fire departments in the country, assuring that your firefighters are fit for duty.





DIRECTORY

Website: www.durhamfd.org

Facebook: www.facebook.com/DurhamFireDepartment

FIRE ADMINISTRATION: 919-560-4242

Fire Chief Daniel Curia

Deputy Fire Chief Christopher Iannuzzi

Divisions

Fire Operations

Fire Prevention

Planning and Administration

Training and Special Ops

Assistant Chief Willie Hall, Jr.

Assistant Chief / Fire Marshal Edward L. Reid

Assistant Chief Andrew "Andy" Sannipoli

Assistant Chief Jeffrey Bunnell

STATIONS

FIRE STATION #1	139 E. MORGAN STREET	919-560-4245
FIRE STATION #2	1001 NINTH STREET	919-560-4251
FIRE STATION #3	822 N. MIAMI BOULEVARD	919-560-4254
FIRE STATION #4	1818 RIDDLE ROAD	919-560-4257
FIRE STATION #5	2212 CHAPEL HILL STREET	919-560-4261
FIRE STATION #6	3700 SWARTHMORE ROAD	919-560-4264
FIRE STATION #7	3919 N DUKE STREET	919-560-4266
FIRE STATION #8	225 LICK CREEK LANE	919-560-1404
FIRE STATION #9	2012 E. CLUB BOULEVARD	919-560-4271
FIRE STATION #10	1805 COLE MILL ROAD	919-560-4227
FIRE STATION #11	2800 W. CORNWALLIS ROAD	919-560-4463
FIRE STATION #12	1230 CARPENTER FLETCHER ROAD	919-560-4460
FIRE STATION #13	2901 S. MIAMI BOULEVARD	919-560-4907
FIRE STATION #14	1327 UMSTEAD ROAD	919-560-1126
FIRE STATION #15	2060 TORREDGE ROAD	919-354-2745
FIRE STATION #16	6303 FARRINGTON ROAD (Chapel Hill)	919-560-1254